

FERC Proposes New Reliability Standard on Geomagnetic Disturbances

The Federal Energy Regulatory Commission (FERC) today proposed to approve a new reliability standard addressing the vulnerability of electric transmission systems to geomagnetic disturbances (GMD) to support continued reliable operation of the nation's Bulk-Power System.

GMDs caused by solar events distort, with varying intensities, Earth's magnetic field. These events are considered to be "high impact, low frequency" events, but can have potentially severe, widespread effects on reliable grid operation, including blackouts and damage to critical or vulnerable equipment.

In May 2013, FERC directed the North American Electric Reliability Corporation (NERC), the Commission-approved Electric Reliability Organization, to develop and submit new GMD standards through a two-stage process. FERC addressed the first stage in June 2014 by approving a standard on implementation of operating plans, procedures and processes to mitigate effects of GMD.

Today's Notice of Proposed Rulemaking (NOPR) addresses the second stage and would adopt NERC's proposed standard that sets requirements for transmission planners and owners to assess the vulnerability of their systems to a "benchmark GMD event," which NERC described as a "one-in-100-year" event. If an entity does not meet certain performance requirements based on the assessments, it must develop a plan to achieve the requirements.

Specifically, the standard would require entities to have system models needed to complete vulnerability assessments, to have criteria for acceptable steady state voltage performance during a benchmark event, and to complete a vulnerability assessment once every 60 calendar months. If the assessment indicates that a system does not meet the performance requirements, the entity would have to develop a corrective action plan addressing how the requirements will be met.

The NOPR also would direct NERC to make modifications. Given the limited historic geomagnetic data and because scientific understanding of such disturbances is still evolving, the Commission is concerned about how a benchmark GMD event is defined in the standard. Proposed modifications would require that the study and benchmarking of GMD events is based on a more complete set of data and a reasonable scientific and engineering approach, FERC said. The Commission also proposed specific revisions to require that once an entity identifies the need for a corrective action plan, it acts in a timely manner.

Comments on today's NOPR are due 60 days after publication in the Federal Register.

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